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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,530	04/06/2004	Laszlo J. Kecskes	ARL 03-60	4322
37064	7590	05/26/2006	EXAMINER	
OFFICE OF COMMAND COUNSEL, U.S. ARMY MATERIEL COMMAND ATTN: AMCCC-B-IP 9301 CHAPEK ROAD FORT BELVOIR, VA 22060-5527			WYSZOMIERSKI, GEORGE P	
ART UNIT		PAPER NUMBER		1742
DATE MAILED: 05/26/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/828,530	KECSKES ET AL.	
	Examiner	Art Unit	
	George P. Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-34 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 4/6/04.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

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1. Claims 3, 12 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Claim 3 indicates that element X may be Sn. Independent claim 1 states that element X is a Group IVA element. Sn is not a Group IVA element. Clarification is required.
- b) In claim 12, the lower limits of "d" and "e" are lower than the lowest permitted by independent claim 1.
- c) It is unclear what is meant by claim 24. A metallic glass is by definition amorphous, so it is unclear how this material could be partially crystalline.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11-15, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (U.S. patent 5,797,443).

Lin discloses amorphous alloys (i.e. metallic glass) having a composition overlapping that recited in the instant claims. Note particularly Lin column 5, lines 46-53, as well as the paragraph overlapping columns 5-6 of Lin. Lin does not disclose any specific examples of compositions within the presently claimed ranges, does not specify the properties recited in instant claims 4-6, 14 and 15, and does not disclose the methods of forming as specified in

instant claims 30 and 31. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention because:

- a) The overlap in composition between the Lin disclosure and the instant claims creates a *prima facie* case of obviousness of this aspect of the invention, because the Lin patent indicates the utility of the prior art compositions over the entire range disclosed in that patent. Compare *In re Malagari* (182 USPQ 549).
- b) With respect to claims 4-6, the properties as claimed would appear to be natural consequences of the composition of an alloy. Thus, prior art alloys having the claimed composition would be expected to have the claimed properties as well. With regard to claims 14 and 15, while Lin does not specify the thickness of materials made therein, Lin column 4, line 55 cautions against the use of certain materials "because they cannot be used to make thick sections", implying that the preferred materials of Lin are in the thicker dimensions as presently claimed.
- c) With regard to the method limitations of claims 30 and 31, this is not seen as resulting in a patentable distinction between the prior art and the claimed invention because a product-by-process claims defines a product. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process; see *In re Thorpe* (227 USPQ 964, Fed.Cir. 1985). The burden then shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product; see *In re Marosi* (218 USPQ 289, Fed.Cir. 1983). In the present case, Applicant has not met this burden.

Thus, the presently claimed products are held to be *prima facie* obvious in view of the disclosure of Lin et al.

4. Claims 1-8, 10-13, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senkov et al. (U.S. Patent 6,623,566).

Senkov discloses bulk metallic glasses having a composition based on the relative radii of the atoms of the elements used to make up the alloy. Following claim 3 and Table 1 of Senkov, if one selects hafnium as the element with the largest radius (clause (b) of Senkov claim 3), and then follows with copper and nickel as the elements of clauses (c) and (d) of Senkov claim 3, and finally uses niobium and aluminum as the elements of clauses (e) and (f) of that claim, one would obtain an alloy composition corresponding to that recited in the instant claims. Senkov does not disclose any specific examples of compositions within the presently claimed ranges, does not specify the properties recited in instant claims 4-6, and does not disclose the methods of forming as specified in instant claims 30 and 31. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention for reasons as specified in item 3 supra. Thus, a *prima facie* case of obviousness is established between the disclosure of Senkov et al. and the presently claimed invention.

5. Claims 1-8, 11-15, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xing et al. (PG Pub. 2002/0036034).

Xing paragraph [0005] discloses metallic glass compositions overlapping those recited in the instant claims. The prior art materials may be made by arc melting; see Xing paragraph [0014]. The prior art discloses examples having dimensions as recited in instant claims 14 and 15; see Xing paragraph [0026]. Xing does not disclose any specific examples of compositions within the presently claimed ranges, does not specify the properties recited in instant claims 4-6, and does not disclose the methods of forming as specified in instant claims 30 and 31. These differences are not seen as resulting in a patentable distinction between the prior art and the

claimed invention for the same reasons as set forth in item no. 3 supra. Thus, a *prima facie* case of obviousness is established between the disclosure of Xing et al. and the presently claimed invention.

6. Claims 1-34 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 152-160 of copending Application No. 10/946,132.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '132 claims are directed to a metallic glass composition, preferably the eutectic Hf-base composition as recited in instant claims 16, 28, 29 and 34. While the instant claims are broader in scope than the '132 claims and recite some properties not specified in the '132 claims, the properties as claimed would appear to be material properties of a given composition. Therefore, from the disclosure of the specific composition in the '132 claims, one of skill in the art would believe that the attendant properties of that composition are the same in either instance.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

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F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700

GPW
May 23, 2006